

PATENT
10/761,164

C. REMARKS

Specification

Applicants amend the specification above to include the application serial numbers of the related cross-reference and to correct typographical errors.

Interview Summary

Applicants' representative contacted Examiner Raymond on August 26, 2005 and requested a scheduled time for an telephone interview. The Examiner suggested that Applicants could call with any questions without an appointment and the Examiner would try to answer them. In a preliminary question, Applicants requested clarification of whether the Examiner intended for the rejection of the system claims to also apply as a method and program product rejection. The Examiner stated that he did intend for the rejection of the system claims to apply to the method and program product claims as well.

Status of the Claims

Claims 1-19 are currently pending and amended in the application.

Lack of Anticipation under 35 USC § 102(e)

Claims 1-19 are not anticipated by Matena et al.

Claims 1-19 stand rejected under 35 U.S.C. §102(e) as being anticipated by Matena et al. (US Patent Application 2005/0005200) (hereinafter Matena) [Office Action, p. 2] The rejection is respectfully traversed in view of the amended claims. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed Cir. 1987). Furthermore the reference must be an enabling disclosure of each and every element as set forth in the claim. *In re Hoecksmas*, 158 USPQ 596, 600 (CCPA 1968); *In re LeGrive*, 133 USPQ 365, 372 (CCPA 1962). Because Matena does not teach each and every

AUS920040029US1

15

PATENT
10/761,164

element of amended claims 1-19 or enable each and every element of these claims, these claims are not anticipated, the rejection should be withdrawn, and the claims should be allowed.

Claims 1, 7, and 13

With regards to claims 1, 7, and 13, independent system claim 1, which is representative of independent method claim 7 and independent computer program product claim 13, with regard to similarly recited subject matter and rejection, reads as follows:

1. A system for enabling remote enterprise management of high availability systems, comprising:
 - a particular high availability system of a plurality high availability systems communicatively connected to a remote enterprise server via a network;
 - said particular high availability system further comprising:
 - a primary node running a middleware stack for supporting web applications, wherein a plurality of layers of said middleware stack are active, wherein said primary node is assigned a virtual IP address to which requests are directed;
 - a secondary node running a redundant middleware stack for mirroring said plurality of layers of said middleware stack of said primary node, wherein a first selection of said plurality of layers of said redundant middleware stack are active and a second selection of said plurality of layers of said redundant middleware stack are in standby; and
 - a data replication partition shared between said primary node and said secondary node with data accessible to a selection of said plurality of layers of said active middleware stack, wherein said selection of said plurality of layers of said active middleware stack correspond to said second selection of said plurality of layers of said redundant middleware stack in standby;
 - a cluster management controller for monitoring a status of said primary node of said high availability system and responsive to said status indicating an error, transferring said virtual IP address from said primary node to said secondary node, turning off power to said primary node, remounting said data replication partition for access by said secondary node, and activating said second selection of said plurality of layers of said redundant middleware stack requiring access to said data within said data replication partition; and
 - a monitoring controller for detecting when said cluster management controller reacts to said error in said primary node and detecting a condition of a plurality of components of said high availability system at a time of said error, wherein said monitoring controller reports said error and said condition of said plurality of components to said remote enterprise server enabled to manage said

AUS920040029US1

16

PATENT
10/761,164

plurality of high availability systems based on a separate report received from each of said plurality of high availability systems.

The Examiner rejects claims 1, 7, and 13 on the same grounds. [Office Action, pp. 2-3] Applicants have amended claims 1, 7, and 13 to further clarify the functions of the high availability system, which are not taught or enabled by Matena. Because Matena does not teach or enable the invention of amended claims 1, 7, and 13, Applicants respectfully request withdrawal of the rejection and allowance of the claim.

Matena does not teach or enable the high availability system of amended claims 1, 7, and

13

First, Matena does not teach or enable the high availability system of claims 1, 7, and 13 because Matena does not teach or enable a high availability system with (1) a primary node running a middleware stack for supporting web applications, wherein a plurality of layers of the middleware stack are active, wherein the primary node is assigned a virtual IP address to which requests are directed; (2) a secondary node running a redundant middleware stack for mirroring the plurality of layers of the middleware stack of the primary node, wherein a first selection of the plurality of layers of the redundant middleware stack are active and a second selection of the multiple layers of the redundant middleware stack are in standby; and (3) a data replication partition shared between the primary node and the secondary node with data accessible to a selection of the plurality of layers of the active middleware stack, wherein the selection of the plurality of layers of the active middleware stack correspond to the second selection of the plurality of layers of the redundant middleware stack in standby.

As originally filed, as to the element of “a particular high availability system of a plurality of high availability systems communicatively connected to a remote enterprise server via a network” the Examiner cited paragraph 78 of Matena and stated “that the distributed computer system is equivalent to the high availability system for remote enterprise management.” [Office Action, p. 2] Applicants note that claims 1, 7, and 13 are amended to further clarify the limitations of the high availability system and respectfully assert that the

AUS920040029US1

17

PATENT
10/761,164

distributed computer system of Matena does not teach or enable each and every element of the amended limitations of a high availability system. In particular, first, Matena does not teach or enable a high availability system with a primary node assigned a virtual IP address to which requests are directed. Next, Matena does not teach or enable a high availability system with a redundant middleware stack in a secondary node with a first selection of layers active and a second selection of the layers in standby. Further, Matena does not teach a data replication partition shared between the primary node and secondary node with data accessible only to those layers of the active middleware stack that correspond to the second selection of layers in the redundant middleware stack in standby.

In contrast, amended claims 1, 7, and 13 teach a high availability system comprising a primary node assigned a virtual IP address to which requests are directed, a redundant middleware stack in a secondary node with a first selection of layers active and a second selection of the layers in standby, and a data replication partition shared between the primary node and the secondary node with data accessible to those layers of the active middleware stack that correspond to the second selection of layers in the redundant middleware stack in standby. Applicants note that the specification supports the amendment throughout, and in particular, in Figures 2, 3, 4, 7 and 8 and paragraphs 0044, 0048, 0050, 0051, 0066, 0071, 0073, 0075, 0077, and 0078. Therefore, because Matena does not teach or enable the high availability system of amended claims 1, 7, and 13, Matena does not teach or enable at least one element of claims 1, 7, and 13. Because Matena does not teach or enable at least one element of claims 1, 7, and 13, the rejection under 102(e) should be removed and the claims allowed.

Matena does not teach or enable the cluster management controller of amended claims 1, 7, and 13

Second, Matena does not teach or enable the cluster management controller of claims 1, 7, and 13 because Matena does not teach or enable a cluster management controller that responsive to monitoring a status of a primary node indicating an error, transfer the virtual IP address assigned to the primary node to the secondary node, turns off power to the primary node,

AUS920040029US1

18

PATENT
10/761,164

remounts the data replication partition for access by the secondary node and activates the second selection of the plurality of layers of the redundant middleware stack requiring access to the data within the data replication partition.

As to the originally filed element of “a cluster management controller for monitoring a status of a particular component of the high availability system” the Examiner cited paragraphs 85 and 121 of Matena and as to the originally filed element of “reacting to adjusting the high availability system when the status indicates an error” the Examiner cited paragraphs 123 and 124 of Matena. [Office Action, p. 2] Paragraph 85 of Matena reads:

The node controllers 103, execution controller 102, and application controllers are distributed over the nodes of a distributed computer system. FIG. 2 illustrates an exemplary distributed computer system including nodes interconnected by a network. The distributed computer system includes an execution control system. The exemplary distributed computer system includes six nodes but other embodiments of the invention may use fewer or more nodes. Each node in the distributed computer system includes a node controller.

Paragraph 121 of Matena reads:

The state model includes objects that present nodes 909, node groups 910, processes 911, and application controllers 912 in the distributed computer system. The state model also includes relationships among the objects. The execution controller maintains its state model objects up to date so that they reflect accurately the current state of the distributed computer system.

Paragraph 123 of Matena reads:

The execution controller 901 includes an event notification mechanism that sends event notifications to registered subscribers when an object in the state model has been created, removed, or its status changed. For example, an appropriate event notification is sent when a process has been started or stopped, or when the execution controller 901 has received a process failure notification from a node controller 903.

Thus, Matena describes a distributed computer system with multiple nodes and an execution controller that maintains a state model reflecting the relationships among nodes and the current state of the nodes in the distributed system and receives process failure notifications from node controllers.

AUS920040029US1

PATENT
10/761,164

Applicants note that claims 1, 7, and 13 are amended to further clarify the functions of the cluster management controller, which are not taught or enabled by Matena. In particular, Matena does not teach or enable the high availability system of amended claims 1, 7, and 13 and therefore also does not teach or enable the cluster management controller within the high availability system of amended claims 1, 7, and 13. Further, in particular Matena describes an execution controller that detects reported failures and sends event notifications of failures, but does not teach or enable, in association with failure management, transfer of a virtual IP address between nodes, turning off power to failed nodes, remounting data partitions, or activating only a portion of the layers of a middleware stack. In contrast, amended claims 1, 7, and 13 teach a cluster management controller that performs error management by transferring the virtual IP address assigned to the primary node to the secondary node, turning off power to the primary node, remounting the data replication partition for access by the secondary node and activating the second selection of the plurality of layers of the redundant middleware stack requiring access to the data within the data replication partition. In addition, Applicants note that the specification supports the amendment throughout, and in particular, in Figures 5 and 8 and paragraphs 0048, 0052, 0055, 0057-0059 and 0081-0084. Therefore, because Matena does not teach or enable the cluster management controller for a high availability system of amended claims 1, 7, and 13, Matena does not teach or enable at least one element of claims 1, 7, and 13. Because Matena does not teach or enable at least one element of claims 1, 7, and 13, the rejection under 102(e) should be removed and the claims allowed.

Matena does not teach or enable the monitoring controller or remote enterprise server of amended claims 1, 7, and 13

Third, Matena does not teach or enable the monitoring controller or remote enterprise server of amended claims 1, 7, and 13 because Matena does not teach or enable a monitoring controller that reports the condition of the components of the primary node and secondary nodes of the high availability system at the time of a failover error to a remote enterprise server enabled to manage multiple high availability systems based on separate reports received from each high availability system.

AUS920040029US1

20

PATENT
10/761,164

As to the originally filed element of “a monitoring controller for detecting when the cluster management controller reacts to the status of the particular component” the Examiner cited paragraph 174 of Matena and stated “that the node controller monitors when the component has failed and an execution is performed to correct it.” [Office Action, pp. 2-3] In addition, as to the originally filed element of “wherein the monitoring controller reports the error and the condition of the plurality of components to the remote enterprise server enabled” the Examiner cited paragraph 180 of Matena. [Office Action, p. 3] Further, as to the originally filed element of “to manage the high availability system based on the report” the Examiner cites paragraph 181 of Matena and states “that the distribution manager 1802 manages the execution of the service of the failed node based on the report.” [Office Action, p. 3]

Applicants note that claims 1, 7, and 13 are amended to further clarify the functions of the monitoring controller and remote enterprise server, which are not taught or enabled by Matena. In particular, Matena does not teach or enable the high availability system of amended claims 1, 7, and 13 and therefore also does not teach or enable the monitoring controller for detecting the status of the components of the high availability system upon error detection in amended claims 1, 7, and 13. In addition, Matena does not teach or enable the high availability system of amended claims 1, 7, and 13 and therefore also does not teach a remote enterprise server enabled to manage the particular high availability system based on reports about the status of the components of the high availability system or multiple high availability systems based on reports from each of the high availability systems. Applicants note that the specification supports the amendment in Figures 10, 11, 12, 13 and paragraphs 0062-0064. Therefore, because Matena does not teach or enable the monitoring controller that passes reports about the status of the components of the high availability system when an error occurs to the remote enterprise server of amended claims 1, 7, and 13, Matena does not teach or enable at least one element of claims 1, 7, and 13. Because Matena does not teach or enable at least one element of claims 1, 7, and 13, the rejection under 102(e) should be removed and the claims allowed.

AUS920040029US1

21

PATENT
10/761,164

Claim 19

Claim 19 currently reads:

19. A system for remotely configuring a plurality of high availability systems, comprising:

a plurality of high availability systems communicatively connected to a network, each of said plurality of high availability systems further separately comprising:

a primary node running a middleware stack for supporting web applications, wherein a plurality of layers of said middleware stack are active, wherein said primary node is assigned a virtual IP address to which requests are directed;

a secondary node running a redundant middleware stack for mirroring said plurality of layers of said middleware stack of said primary node, wherein a first selection of said plurality of layers of said redundant middleware stack are active and a second selection of said plurality of layers of said redundant middleware stack are in standby; and

a data replication partition shared between said primary node and said secondary node with data accessible to a selection of said plurality of layers of said active middleware stack, wherein said selection of said plurality of layers of said active middleware stack correspond to said second selection of said plurality of layers of said redundant middleware stack in standby;

a cluster management controller for monitoring a status of said primary node and responsive to said status indicating an error, transferring said virtual IP address from said primary node to said secondary node, turning off power to said primary node, remounting said data replication partition for access by said secondary node, and activating said second selection of said plurality of layers of said redundant middleware stack requiring access to said data within said data replication partition;

a monitoring controller for detecting monitored information about a plurality of components of each separate one of said plurality of high availability systems at a same time as said status indicates an error; and

a remote enterprise server communicatively connected to said network, wherein said remote enterprise server receives said monitored information about each of said plurality of high availability systems from each said separate monitoring controller, analyzes said monitored information, and sends requests

AUS920040029US1

22

PATENT
10/761,164

for reconfiguration to each of said plurality of high availability systems which submit monitored information indicating errors which can be adjusted by reconfiguration.

As originally filed, the Examiner rejects claim 19 on the same grounds as the rejection of claims 1, 7, and 13. [Office Action, pp. 2-3] Applicants first note that claim 19 includes the element of "sends request for reconfiguration to said plurality of high availability systems which submit monitored information indicating errors which can be adjusted by reconfiguration" which is not included in claims 1, 7, and 13 and is not specifically rejected by the Examiner with regard to claim 19. Regardless of whether the Examiner's previous assertions were correct or complete, however, Applicants amend claim 19 to clarify the functions of the plurality of high availability systems, which are not taught or enabled by Matena, and therefore traverse the amended elements in view of Matena. Because Matena does not teach or enable the invention of amended claim 19, Applicants respectfully request withdrawal of the rejection and allowance of the claim.

In particular, Applicants amend claim 19 to teach a plurality of high availability systems, where each high availability system separately includes a primary node, a secondary node, a data replication partition, a cluster management controller and a monitoring controller, as described with respect to the amendments to claim 1. Applicants respectfully assert that because Matena does not teach or enable the particular high availability system of amended claim 1, Matena also does not teach or enable the plurality of high availability systems in claim 19 that each mirror the particular high availability system in amended claim 1. Therefore, because Matena does not teach or enable the plurality of high availability systems or remote enterprise server of amended claim 19, Matena does not teach or enable at least one element of claim 19. Because Matena does not teach or enable at least one element of claim 19, the rejection under 102(e) should be removed and the claims allowed.

Claims 2-6, 8-12, and 14-18

In addition, because claims 1, 7, and 13 are not anticipated by Matena, at least by virtue of their dependency on claims 1, 7, and 13, Matena does not teach or enable each element of dependent claims 2-6, 8-12, and 14-18 under 35 U.S.C. §102(e). Because anticipation is not

AUS920040029US1

23

PATENT
10/761,164

established for claims 2-6, 8-12, and 14-18, Applicants respectfully request allowance of claims 2-6, 8-12, and 14-18.

In addition, Applicants note that claims 2-6, 8-12, and 14-18 are each amended to maintain antecedent basis in view of the amendments made to claims 1, 7, and 13.

AUS920040029US1

24

PATENT
10/761,164

Conclusion

Applicants note the citation of pertinent prior art cited by the Examiner.

In view of the foregoing, withdrawal of the rejections and the allowance of the current pending claims is respectfully requested. If the Examiner feels that the pending claims could be allowed with minor changes, the Examiner is invited to telephone the undersigned to discuss an Examiner's Amendment. Further, Applicants reiterate the request for a telephone conference with the Examiner at the Examiner's earliest convenience.

Respectfully submitted,

 on 9/13/05

Amy J. Pattillo
Attorney for Applicants
Reg. No 46,983
P.O. Box 161327
Austin, Tx 78716
512.402.9820 *voice*
512.306.0417 *fax*

AUS920040029US1

25